

REMARKS

This is a full and timely response to the non-final Office Action dated March 24, 2003 (Paper No. 15). By this amendment, Applicants seek to amend claim 1 to further clarify a scope of the invention sought to be patented by the present application. Support for this amendment can be found variously throughout the specification, including, for example, page 23, line 19 to page 24, line 3. No new matter has been added. Reexamination and reconsideration in light of the present amendment and the following remarks are respectfully requested.

Election/Restriction:

In the action, the Examiner withdrew claim 52 from consideration as being directed to a non-elected invention because "claim 53 is not belonged to the elected embodiment 1 of Figures 3, 9 and 13". Because claim 53 was later acted upon in sections 2, 4 and 5 of the action, the Applicants assume the Examiner meant to state that claim 52 does not belong to the elected embodiment. If the Applicants have assumed incorrectly, clarification is respectfully requested.

New Claims:

In section 3 of the action dated March 24, 2003 (Paper No. 15) the Examiner denied the request to reinstate claims 13-22, which were inadvertently withdrawn due to a typographical error in the paper filed May 1, 2001, because the claims were not presented as new claims with new claim numbers. The present amendment rectifies this situation by presenting original claims 13-22 as new claims 57-66,

accompanied by their appropriate status identifiers. As explained in the paper filed April 15, 2002, each of these claims depend either directly or indirectly on claim 1, and read on the elected species of Figs. 3, 9 and 13, with claim 1 being generic. Therefore, reinstatement of original claims 13-22, re-presented herewith as new claims 57-66, is respectfully requested.

Allowable Subject Matter:

The Applicants acknowledge and thank the Examiner for acceptance of claims 6-8 as allowable subject matter. As suggested by the Examiner, the subject matter of claims 6-8 has been set forth in independent form in newly added claims 54-56. Consequently, claims 54-56 are allowable for the reasons stated in sections 6 and 7 of the action dated March 24, 2003.

Claim Objections:

Claims 2, 4, 6-12 and 53 were objected to in section 2 of the action dated March 24, 2003 for various informalities. The Applicants thank the Examiner for a thorough reading of the claims, and have amended the claims herewith to incorporate the suggestions made by the Examiner. Withdrawal of these rejections is therefore courteously solicited.

Claim Rejections - 35 U.S.C. § 102(e):

In the action, claims 1, 2, 4, 9-12 and 53 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 5,999,444 to Fujiwara et al. ("Fujiwara"). This rejection is respectfully traversed in light of the present amendment.

Independent claim 1 of the present invention, as amended, recites, *inter alia*, a "Fowler-Nordheim (FN) type tunneling film which has a FN type tunneling electroconductivity, said FN type tunneling film being made entirely of material having a dielectric constant greater than that of silicon oxide".

As clearly explained in the specification, this FN type tunneling film 10 is made entirely of a single material, and is not divided into varying portions of varying materials. (See page 23, line 19 to page 24, line 3; Fig. 3). This FN type tunneling film, made of material having a dielectric constant greater than that of the conventionally used silicon oxide, allows the overall thickness of the gate insulation film 6 to be effectively reduced and, as a result, enables reduction of the operating voltage. (See page 29, lines 4-25).

In contrast, the invention disclosed in Fujiwara fails to disclose, teach or suggest a FN type tunneling film made entirely of material having a dielectric constant greater than that of silicon oxide. In fact, at least the majority of the tunnel insulating film 10 disclosed in Fujiwara is made of silicon oxide, formed by thermal oxidation. (col. 11, lines 34-36). Although the thin layer 10a disclosed in Fujiwara is formed of oxynitride, this represents only a portion of the tunnel insulating film, and fails to meet the full limitations of claim 1. Accordingly, because Fujiwara fails to disclose, teach or suggest a FN type tunneling film being made entirely of material having a dielectric constant greater than that of silicon oxide, a *prima facie* rejection of claim 1 has not been established, and withdrawal of this rejection is respectfully requested. "A claim is anticipated only if each and every element as set forth in

the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Accord. M.P.E.P. § 2131.

Moreover, claims 2, 4, 9-12 and 53, being dependent either directly or indirectly upon allowable base claim 1, also represent allowable subject matter for at least the reasons explained above, and withdrawal of their rejections is courteously solicited.

Additionally, claims 1, 2, 4 and 53 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,518,617 to Nakamura et al. ("Nakamura"). This rejection is respectfully traversed.

In the action, the Examiner concedes that Nakamura fails to disclose a plurality of word lines, a plurality of bit lines and a gate electrode being respectively connected to the plurality of word lines. The Examiner seeks to remedy Nakamura's deficiencies by alleging that these items are inherent in nonvolatile memory devices; citing, but not applying, Fujiwara as allegedly supporting this position. However, as described on page 20, lines 7-25, the constitution and alignment of the word lines, bit lines and gate electrode connections in the present invention allow the memory devices of the present invention to achieve various benefits over the prior art. None of these benefits are disclosed, taught or suggested in Nakamura. Moreover, because Fujiwara has not been directly applied to the claims of the present invention to remedy the conceded deficiencies of Nakamura, the rejection of the claims under Nakamura fails to establish a *prima facie* rejection under § 102(e), and withdrawal thereof is respectfully requested.

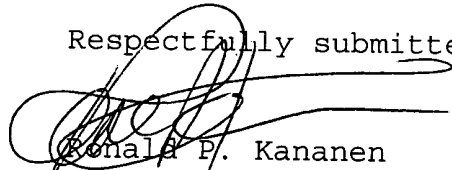
Additionally, claims 2, 4 and 53, being dependent either directly or indirectly upon allowable base claim 1, also represent allowable subject matter for at least the reasons explained above, and withdrawal of their rejections is respectfully requested.

Conclusion:

For at least the foregoing reasons, claims 1-12 and 53-66 are allowable and withdrawal of their rejections is respectfully requested. In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is invited to telephone the undersigned attorney at the below-listed number.

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Respectfully submitted,



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